

appended claims, rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed is:

1. A method in a computer system for individualizing a heartbeat signal for use as a biometric marker comprising the steps of:

acquiring a plurality of electronic heartbeat signals from an individual in an electronic signal form;

for each electronic signal, measuring, a plurality of pre-selected features;

for each of said features, calculating the measurement's average;

subtracting the measurement's average from each of the measurements to yield a centroid value;

calculating a standard deviation of each measurement;

dividing the centroid value by the standard deviation for each measurement to give a quotient value; and

calculating the probability of divergence of each measurement using the quotient value in a T-distribution analysis.

2. A computer readable medium containing instructions for controlling a computer system to individualize a heartbeat electronic signal for use in biometric authentication, by:

- acquiring a plurality of electronic heartbeat signals from an individual in an electronic signal form;
- for each electronic signal, measuring, a plurality of pre-selected features;
- for each of said features, calculating the measurement's average;
- subtracting the measurement's average from each of the measurements to yield a centroid value;
- calculating a standard deviation of each measurement;
- dividing the centroid value by the standard deviation for each measurement to give a quotient value; and
- calculating the probability of divergence of each measurement using the quotient value in a T-distribution analysis.

3. The computer readable medium of claim 2 where said measurements are made on only one variable per observation.

4. The computer readable medium of claim 2 where said measurements are made on two variables per observation.

5. The computer readable medium of claim 2 where said measurements are made on a plurality of variables per observation.

6. A method for individualizing heartbeat waveform comprising the steps of:
capturing and recording a number of heartbeat waveforms;
extracting particular univariate and multivariate features from the waveforms;
individualizing measurements of the univariate and bivariate features of the waveform;
and
calculating probabilities for measurements of the univariate and bivariate features.

7. The method of claim 6 wherein the step of individualizing further comprises the steps of:

subtracting each univariate measurement from the average value of the univariate measurement to yield a centroid;
dividing each centroid by the standard deviation of the univariate feature to yield a quotient;
determining the probability of the quotient using a distribution calculation; and
selecting a threshold minimum probability.